MetaBright™ Compact Front Light

METAPHASE LIGHTING TECHNOLOGIES

MB-CFL

The MetaBright™ Compact Front Light features eight high powered LEDs, proprietary Metaphase thermal management technology, a built-in constant current driver, and a built-in Strobe with 10X power boosting. The MB-CFL was designed for longer working distances and features a rugged industrial housing such as those found in industrial robotics work envelopes.

FEATURES

- Homogenous light output that provides high intensity illumination
- Shock and vibration resistant
- LED thermal management for stable performance
- Flicker free performance and instant start up with Metaphase analog driver technology
- Built-in Strobe with 10X power boosting
- Built-in Constant Current Driver with 0 – 10VDC intensity control, compatible with DDC-3 and ILD-35 Dimmers

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
UV365	Ultraviolet Short / 365nm
UV395	Ultraviolet Long / 395nm

GENERAL SPECIFICATIONS

Power Source:	24VDC ±5%
Cable (Standard):	10-foot cable with flying leads
Housing:	Black Anodized Aluminum
Ambient Temp:	-20°C to 40°C
Lifetime Expectancy:	75,000 hours (except UV)

METAPHASE
215-639-8699

www.metaphase-tech.com

MetaBright™
Compact Front Light

PRODUCT DATA SHEET

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MODEL	Dimensions W x L x H Inches (cm)	Active Area Inches (cm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable AWG/ Conductors	Max Input Current @24VDC
MB-CFL2.5x1.25	3.4 x 3.9 x 1.0 (8.64 x 9.89 x 2.54)	1.45 x 2.90 (3.68 x 7.37)	.50 (227)	1	10ft	24/4 or 24/6	0.5A

Wiring (4 conductor with Intensity Control)**

Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

Wiring (4 conductor without Intensity Control)

Wire Color	Function
RED	+24VDC
WHITE	+24VDC
BLACK	GROUND (24V RTN)
GREEN	GROUND (24V RTN)

Wiring (6 conductor with Intensity Control)**

Wire Color	Function
RED, BROWN	+24VDC
GREEN	SIGNAL GROUND
BLACK, BLUE	GROUND (24V RTN)
WHITE	0-10VDC INTENSITY CONTROL

When not using Intensity Control, connect the 0-10V control line to +24VDC and connect Signal Ground to Ground (24V RTN)

Wiring (6 conductor Strobe mode)

Wire Color	Function
RED, BROWN	+24VDC
BLACK	GROUND (24V RTN)
WHITE	RISING EDGE TRIGGER
BLUE	FALLING EDGE TRIGGER
GREEN	TRIGGER GROUND

M12 (5 position male)**

Pin #	Function
1	+24VDC
2	0-10VDC Intensity Control
3	GROUND (24V RTN)
4	SIGNAL GROUND
5	No Connection

The M12 connector option is not recommended for lights rated more than 4 amps

Wiring with ULC-2

Wire Color	Function
RED, WHITE (+)	LED INPUT
BLACK, GREEN (-)	

Terminated within a 2 position ULC-2 output connector (Phoenix Contact P/N: BCP-508-2)

**Note: The 0-10VDC Intensity Control input can accept voltages from 0-24VDC where the light will operate at full intensity in the 10-24VDC range. The light is proportionally dimmer for any Intensity Control voltage less than 10VDC and the light is OFF at approximately 0V or not connected (floating).

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PART NUMBER KEY										
MODEL	SIZE	-	WAVELENGTH	-	DRIVER* (most common)	-	LENS	-	CABLE LENGTH	-	CONN.** (most Common)
MB-CFL	XXX	-	XXXXX	-	XXXXX	-	XXX	-	XXX	-	XXXX
MB-CFL	**2.5x1.25**		**W** (White 6000K, Nominal) **R** (Red 630nm) **G** (Green 530nm) **B** (Blue 470nm) **IR850** (Infrared 850nm) **UV365** (UV Short 365nm) **UV395** (UV Long 395nm)		**24Z** **24-BIS**XXX **24-ILD** **24Z-TRG** **U**[1]		**L11** (11°) **L30** (30°)		**5M** **10M**		**M12D**[1][2]
					XXX=rate in µs Example: 250		Select one or leave blank for L44 lens		Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		Select or leave blank for flying leads

Example 1: **MB-CFL2.5x1.25-BIS300-L30**
Example 2: **MB-CFL2.5x1.25-24Z-6M**

[1]Not available in lights exceeding 4A input current
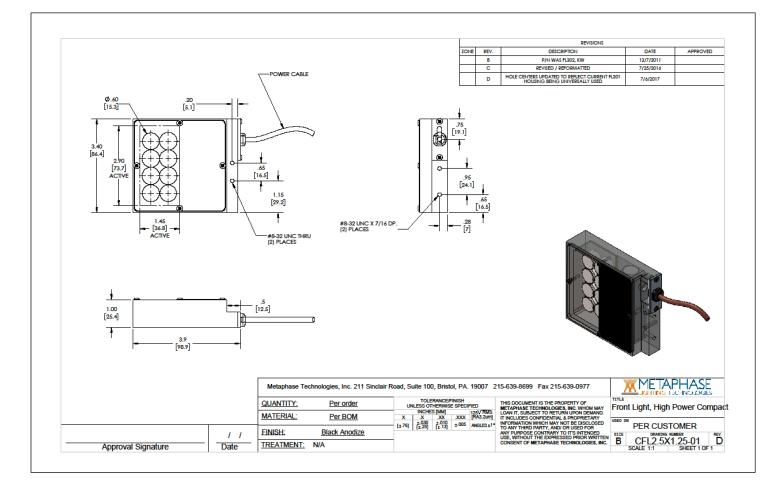[2]Default cable length for an M12D connector is 19 inches

Contact Metaphase Technologies or your local representative for options such as custom diffusers, lenses, polarizers, IP-rated enclosures for harsh environments, higher intensity, custom wavelengths, higher uniformity, etc. Not all options are available for all lights.

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Sample Part Number: **MB-CFL2.5x1.25-BIS300-L30**

Engineering drawing — Front Light, High Power Compact. Drawing Number CFL2.5X1.25-01, Rev D, Scale 1:1, Sheet 1 of 1. Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977.

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	B	P/N WAS FL302, KW	12/7/2011	
	C	REVISED / REFORMATTED	7/25/2016	
	D	HOLE CENTERS UPDATED TO REFLECT CURRENT FL301 HOUSING BEING UNIVERSALLY USED	7/6/2017	

COMPLIANCE	CONTACT US
RoHS compliant CE	Contact Metaphase Technologies at **215-639-8699** or your local representative for additional details, options and customizations.

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